ABSTRACT:

An apparatus (20) for performing a temperature measurement function is proposed. It comprises a first circuit (11) and a second circuit (12). The first circuit (11) has a transistor (M1), a resistor (R_{temp}), and a parallel arrangement of n diodes (B1 – Bn). The second circuit (12) comprises a transistor (M2) and a parallel arrangement of m diodes (C2). An operational amplifier (13) is on the input side being connected to the first circuit (11) and the second circuit (12). This operational amplifier (13) provides a gate voltage for the transistors (M1, M2). There is an output stage with p output transistors (N1 - Np), and an output resistor ($r*R_{temp}$). The output stage performs a current to output voltage conversion in order to provide an output voltage ($V_{tempout}$) that depends on the actual temperature (T).

Fig. 2A